

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) A glass substrate machining method comprising the steps of:
machining a glass substrate by using a laser;
controlling an amount of air bubbles in said glass substrate to improve the workability of said glass substrate.

2. (original) A glass substrate machining method comprising the steps of:
machining a glass substrate by using a laser;
controlling an amount of air bubbles in said glass substrate to improve the workability of said glass substrate, and wherein
a thin insulator is formed on a glass surface.

3. (original) The glass substrate machining method according to claim 2, wherein said thin insulator on said glass surface is glass formed by coating.

4. (original) The glass substrate machining method according to claim 2, wherein said thin insulator formed on said glass surface is an organic insulator film.

5. (original) The glass substrate machining method according to claim 4, wherein said thin organic insulator on said glass surface is formed by coating.

6. (original) The glass substrate machining method according to claim 4, wherein said thin insulator on said glass surface is made into a sheet formed^d by using a laminator.

7. (currently amended) A glass substrate machining method comprising the steps of:

machining a glass substrate by using a laser;

controlling an amount of air bubbles in said glass substrate; and

controlling a condensation of the laser in a manner that the laser beam is condensed into focus on an inside portion of the bubble-bearing glass substrate;

wherein a cavity or bore is formed ~~to form a~~
~~vacaney~~ only inside of said glass substrate.

8. (original) A glass substrate machining method comprising the steps of:

machining a glass substrate by using a laser;

controlling an amount of air bubbles in a glass substrate so that said glass substrate, after said laser machining, has a large surface area on the machined surface due to bubble traces in glass; and

forming a metal film through simple electroless plating, to improve heat radiation property of the metal-film-formed portion.

9. (original) The glass substrate machining method according to claim 1, wherein a CO₂ laser is used to perform the laser machining.

av 10. (original) The glass substrate machining method according to claim 2, wherein a CO₂ laser is used to perform the laser machining.

11. (original) The glass substrate machining method according to claim 7, wherein a CO₂ laser is used to perform the laser machining.

12. (original) The glass substrate machining method according to claim 8, wherein a CO₂ laser is used to perform the laser machining.

13-30. (canceled)

31. (new) In a method of machining a glass substrate by application of laser irradiation to said glass substrate from a laser, the improvement wherein:

said glass substrate is a glass substrate having therein discrete air bubbles; and

said laser is a CO₂ laser or an excimer laser.

32. (new) A machined glass product made by the process of claim 31.

33. (new) The method of claim 31, wherein said glass substrate is provided on a surface thereof with a thin layer selected from the group consisting of a thin insulator layer and a thin metal layer.

AR 34. (new) The method of claim 33, wherein said thin layer is an insulator layer and has a thickness of about 10-70 μ m.

35. (new) The method of claim 34, wherein said thin insulator layer is an organic film formed by lamination or an inorganic substance applied by spin coating.

36. (new) The method of claim 33, wherein said thin layer is a metal film having a thickness of approximately 10 μ m or less.

37. (new) The method of claim 31, wherein said laser irradiation is carried out in a plurality of stages.

38. (new) The method of claim 37, wherein a first stage of laser irradiation is carried out at a first pulse width, and a second stage of said laser irradiation is carried out with a pulse width greater than said first pulse width.

39. (new) The method of claim 38, wherein said second stage of laser irradiation is performed a plurality of times.

40. (new) The method of claim 38, wherein said plural stages of laser irradiation are carried out with the diameter of the laser beam remaining substantially unchanged.

41. (new) The method of claim 40, wherein the pulse width of laser irradiation between said first stage and said second stage is changed.

42. (new) The method of claim 38, wherein the pulse width of laser irradiation between said first stage and said second stage is changed.

43. (new) The method of claim 38, wherein said laser irradiation is applied to form a through-hole in said substrate, and the focus of the laser in the depth direction of the through hole is changed from the first stage to the second stage.

44. (new) The method of claim 31, wherein the bubble diameter of the discrete air bubbles is greater than or equal to 50 μ m.